[twocolumn,prl,aps,showpacs]revtex4 epsfig document "Fringe Structure in the Phase-Space Dynamics of Atomic Stabilization in An Intense Field

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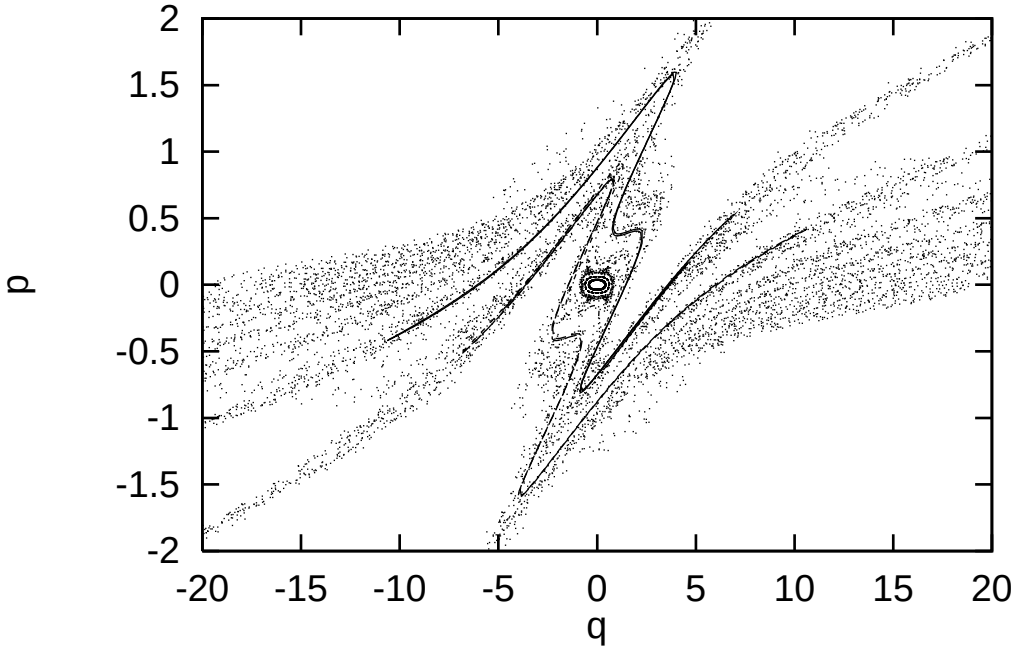
abstract An analytical expression of a Floquet operator, which describes the evolution of a wave packet in combined atomic and an intense laser field, is obtained approximately in the stabilization regime. Both the classical and quantum versions of the Floquet operator are used to study the phase-space dynamics of atomic stabilization, and the 'fringe structure' in the phase-space is clearly demonstrated. Furthermore, we investigate the dynamical mechanism and characters of this striking structure, and find that this structure is very closely related to the classical invariant manifolds.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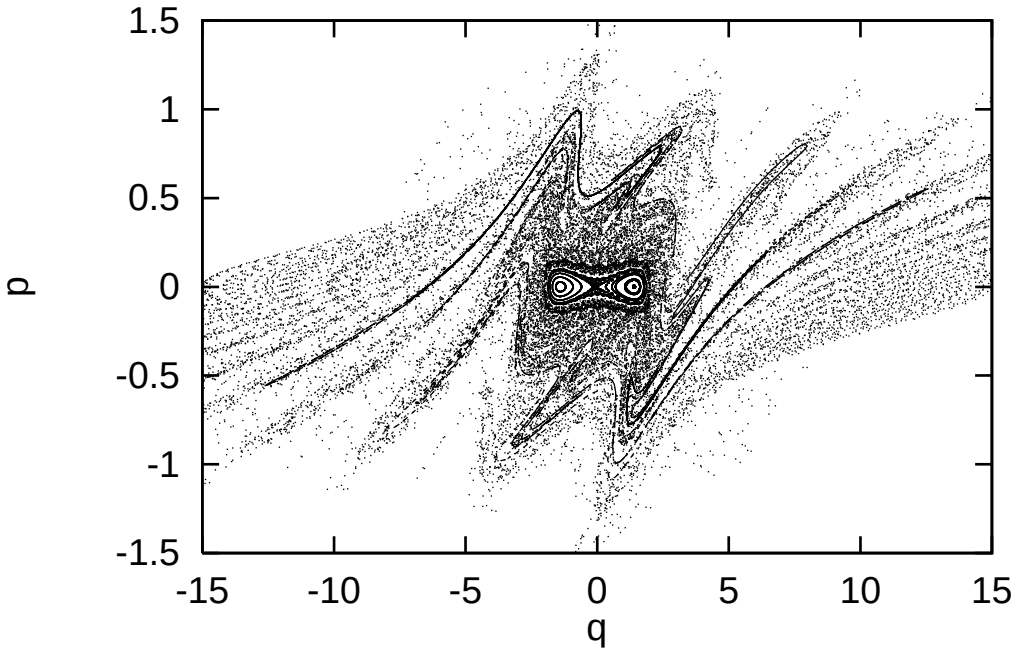
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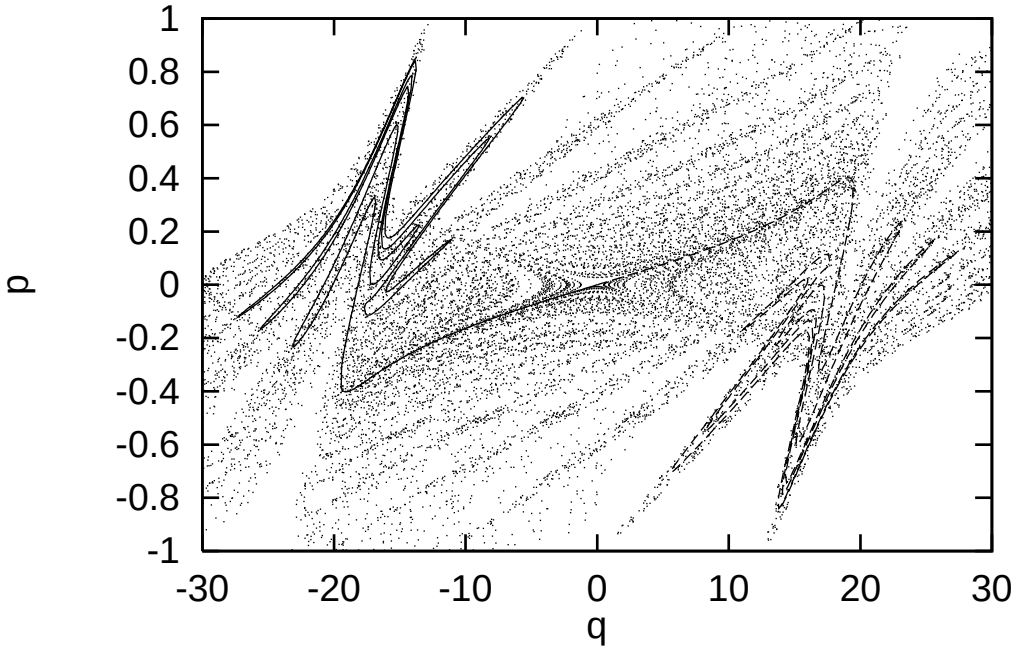
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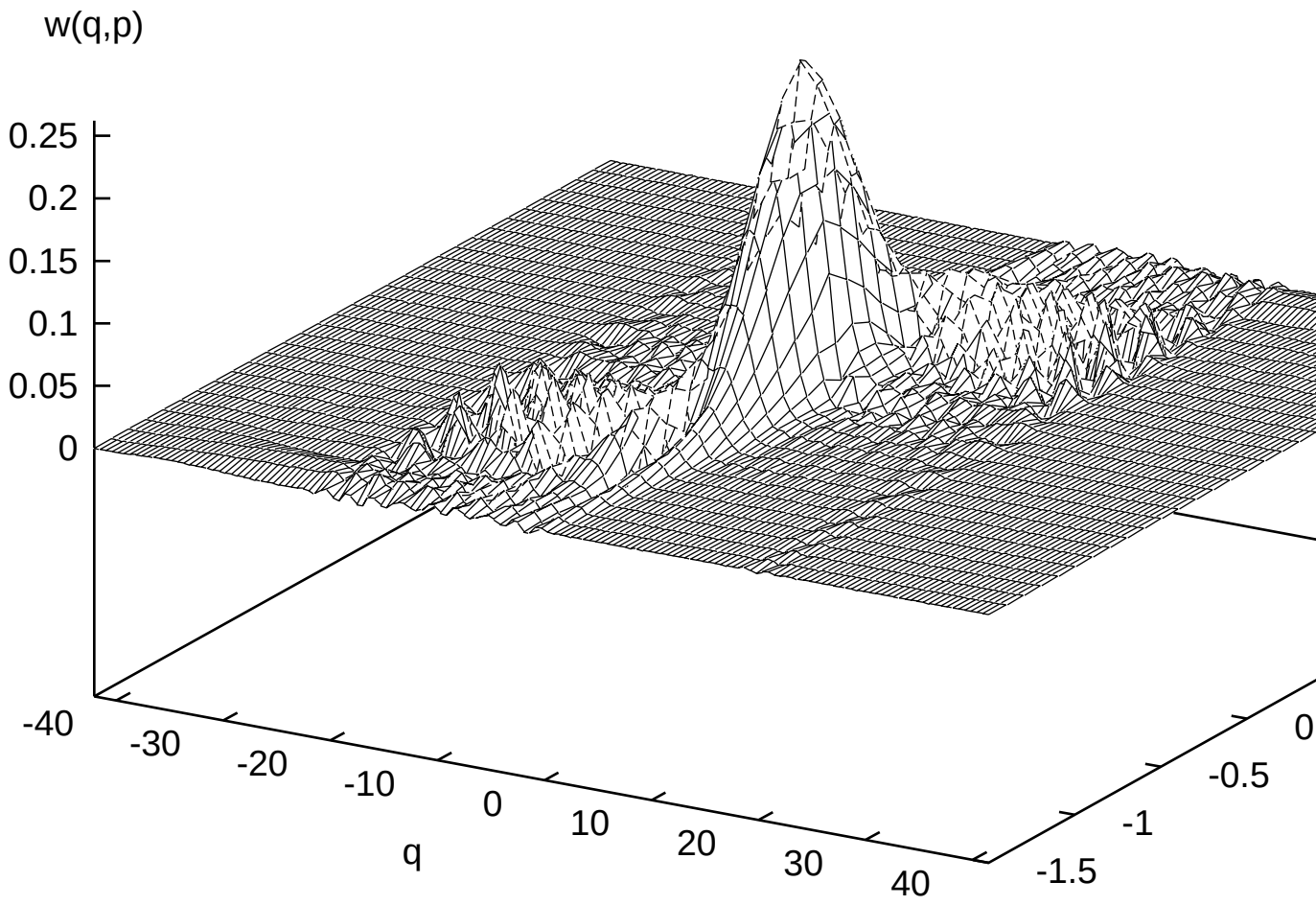
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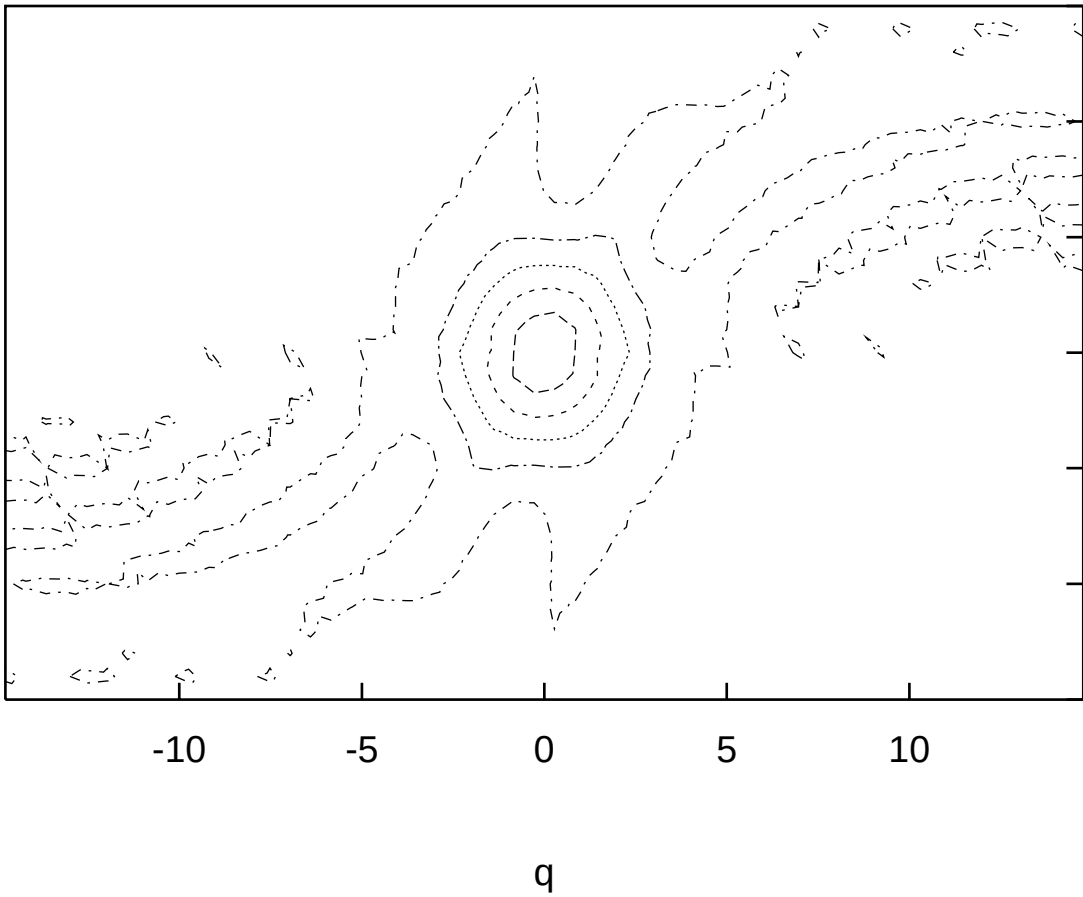
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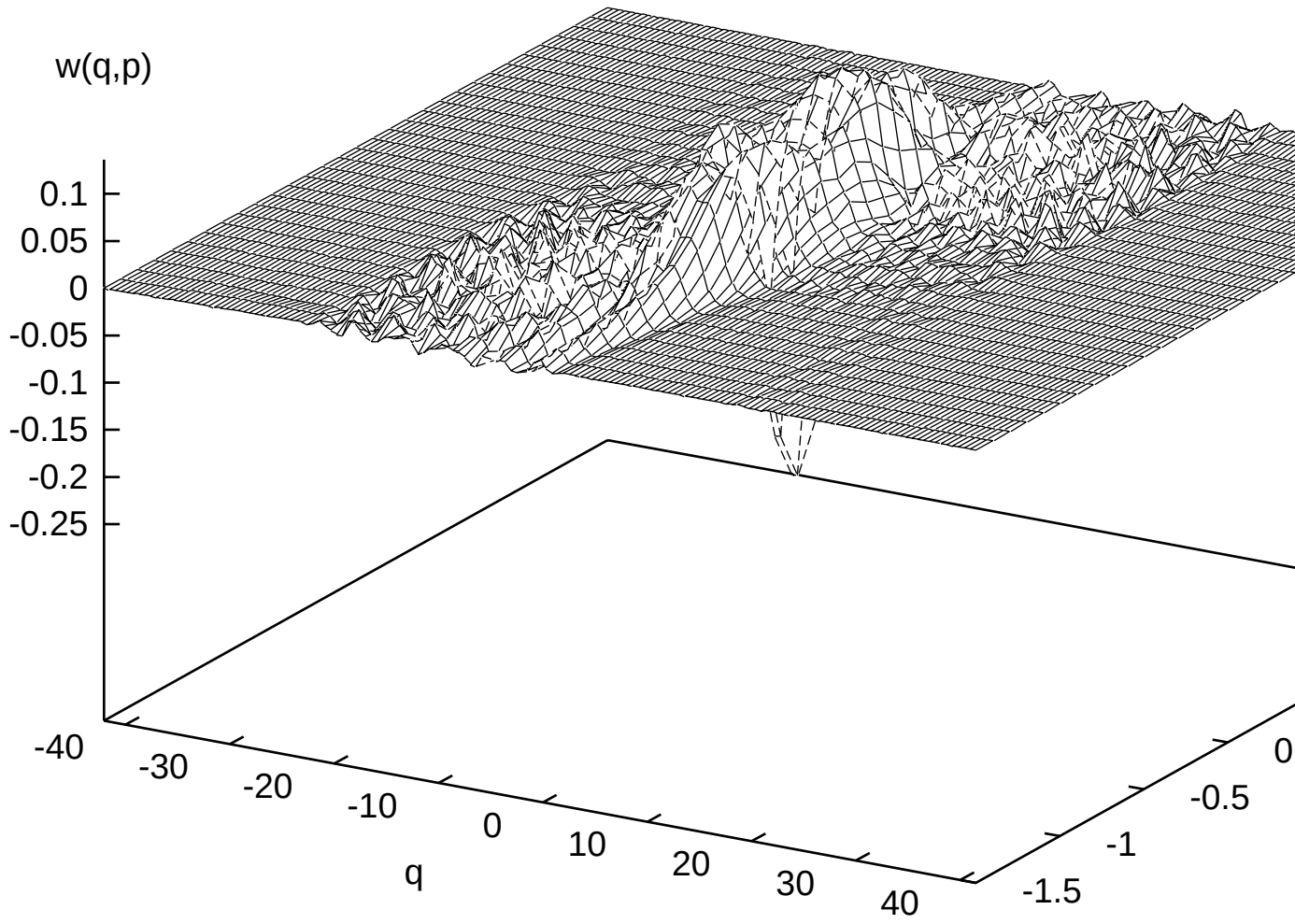
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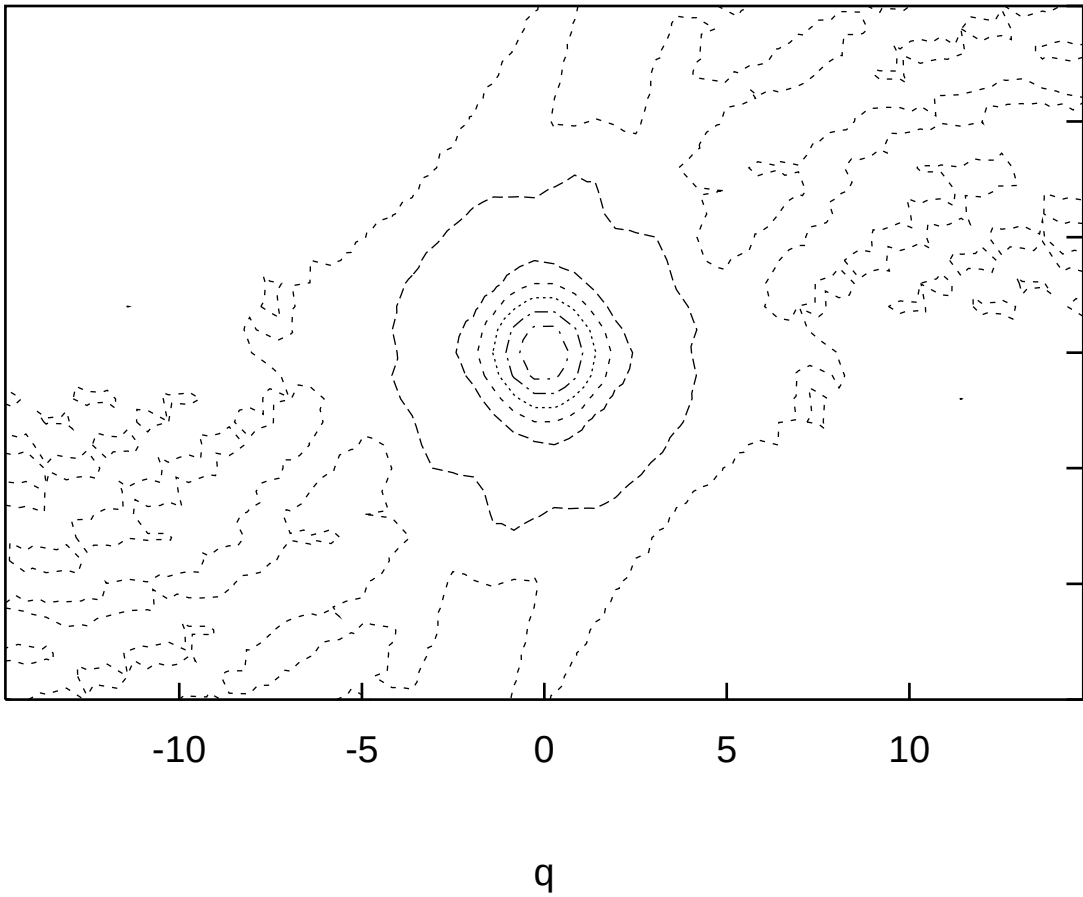
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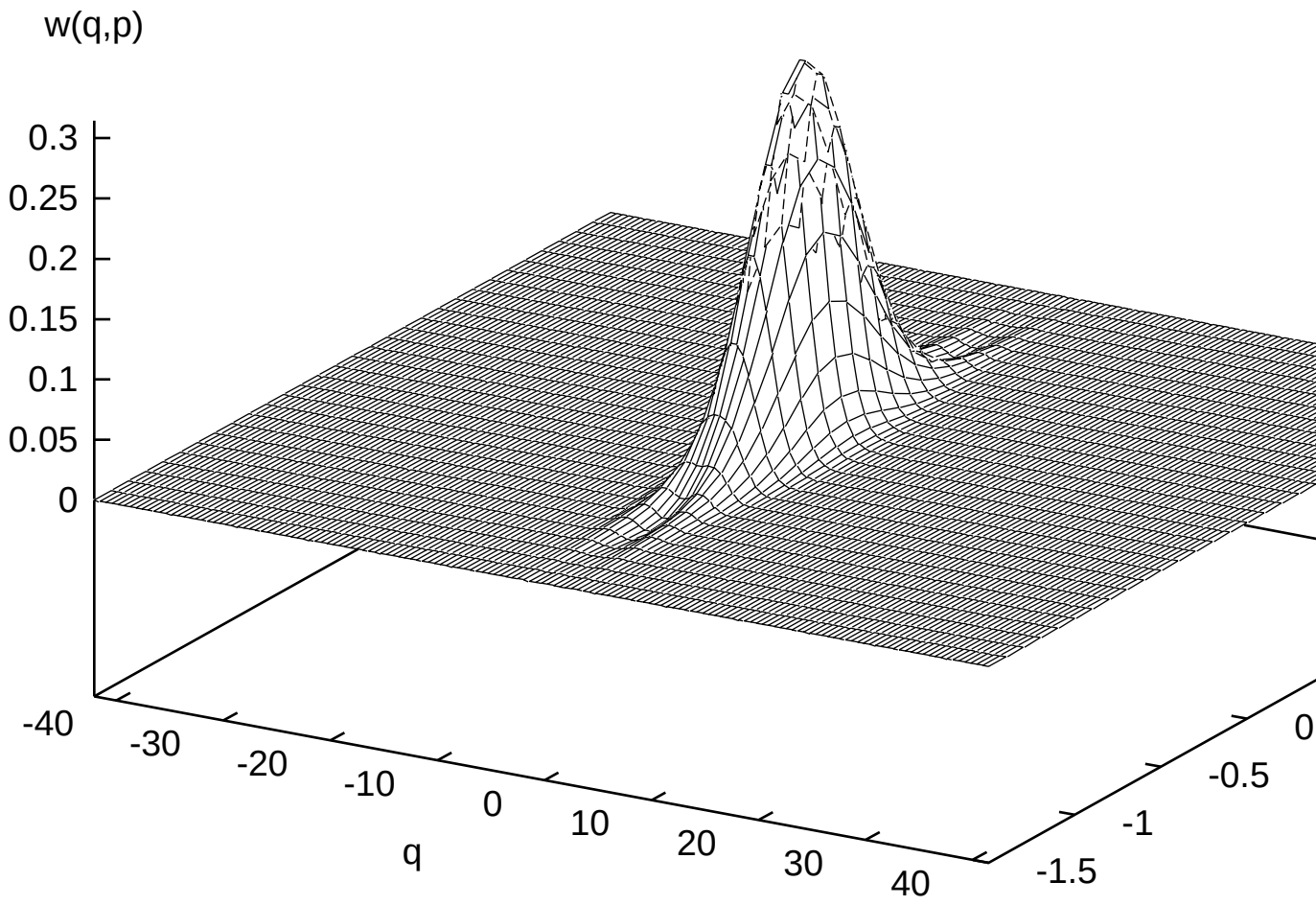
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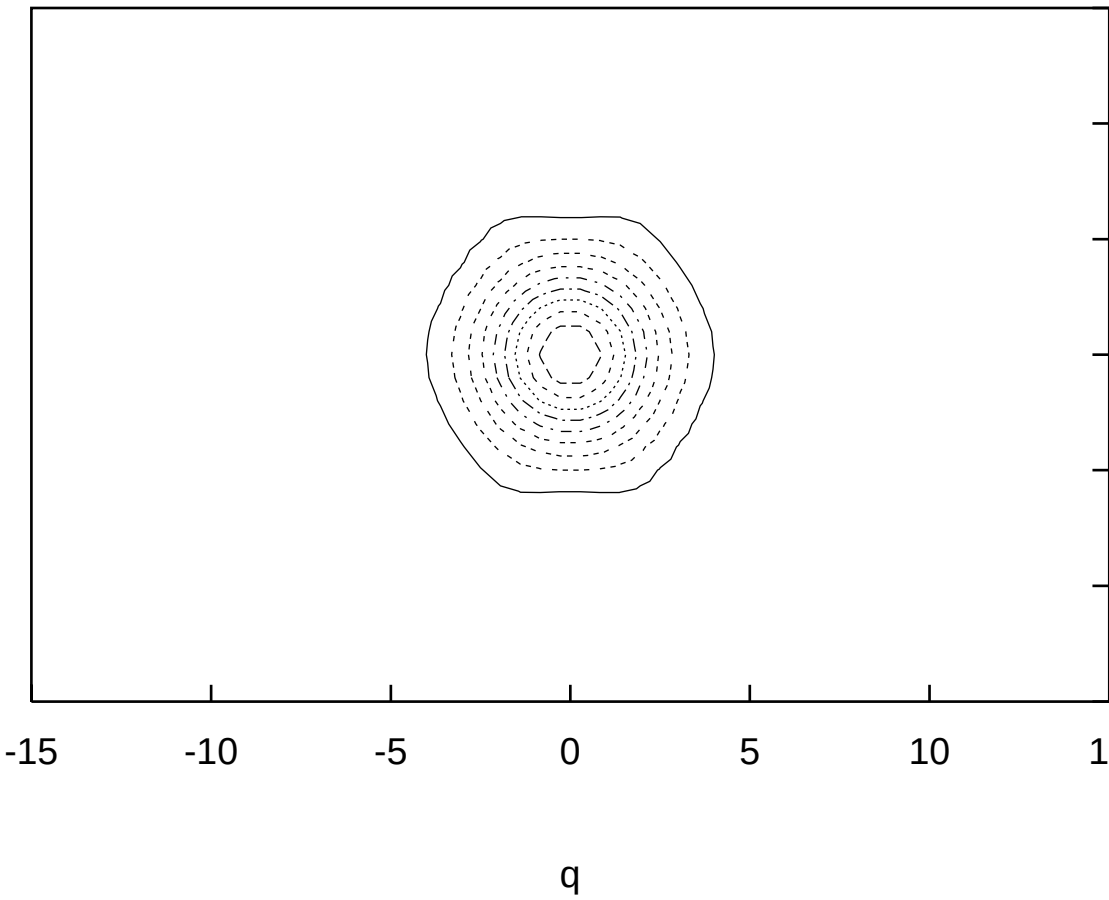
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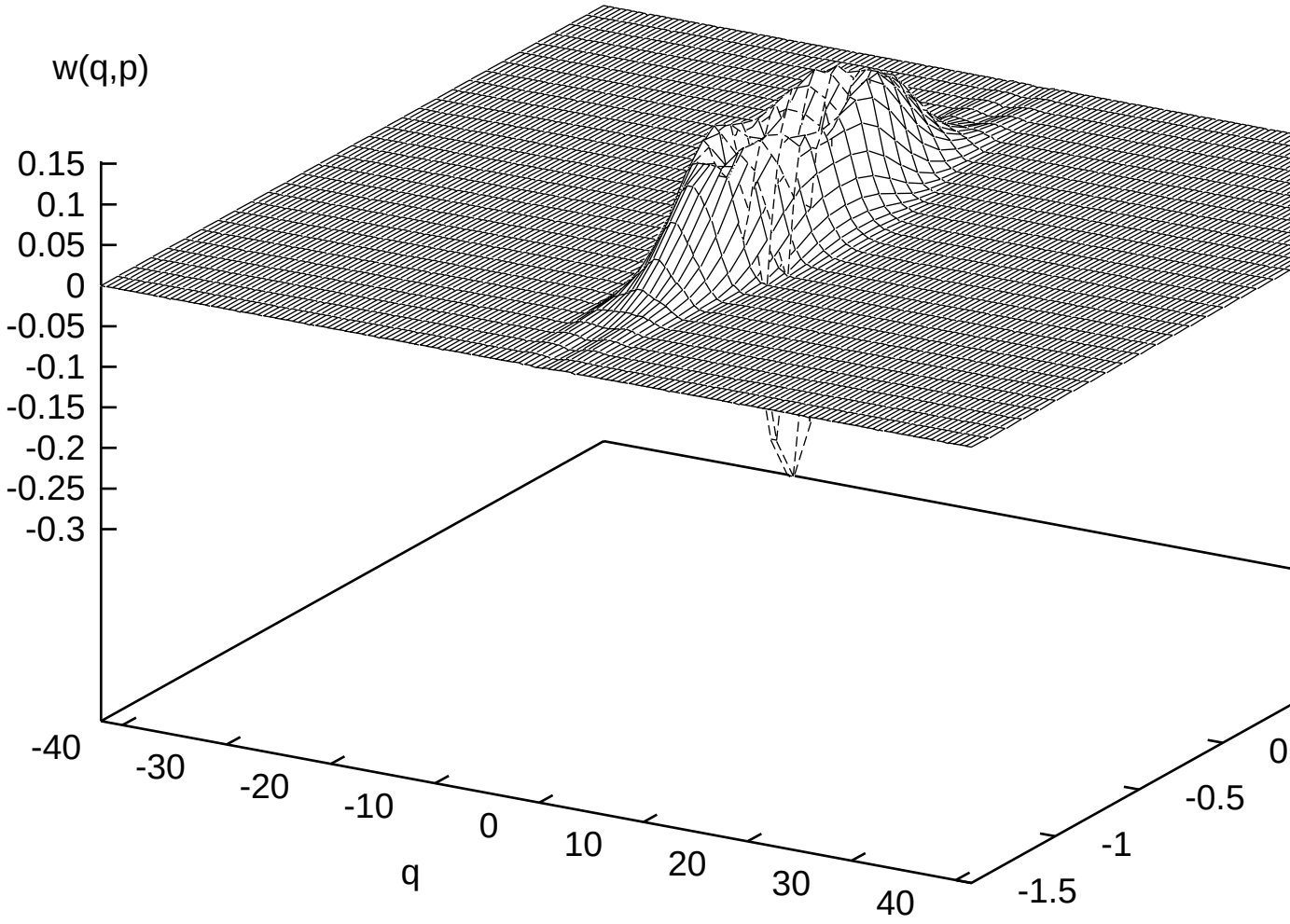
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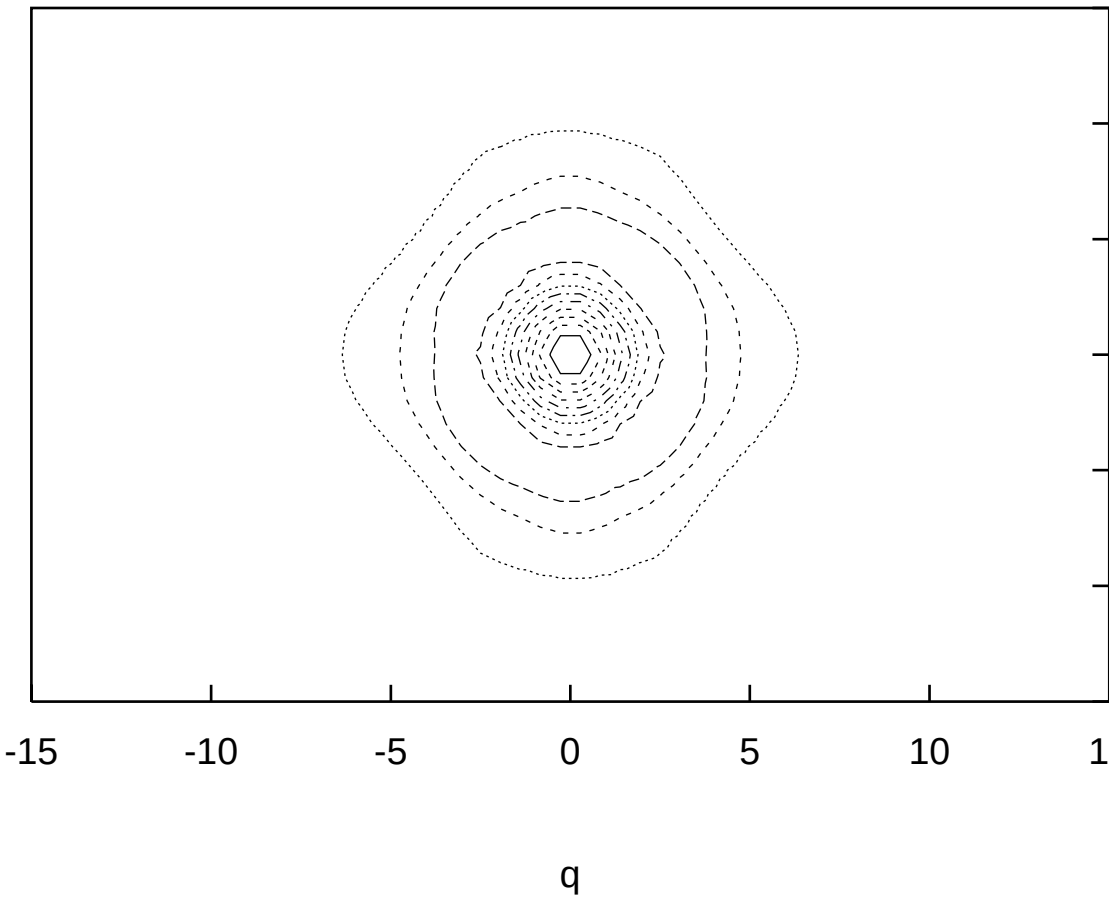
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